

TWO SPECIES OF *MEDETERA* FISCHER (DIPTERA, DOLICHOPODIDAE) NEW TO BRITAIN

JONATHAN H. COLE

2 Lenton Close, Brampton, Huntingdon, Cambs. PE18 8TR.

Medetera parenti Stackelberg 1925

In June 1986 Ivan Perry bred out some *Medetera* which did not appear to be a known British species and he sent me a pair to examine. I identified them as *M. parenti* from Negrobov (1972-77) and confirmed the male from the genitalia description and figures. A particular feature of the aedeagus is a large dorsal bifid thorn-like process just distad from where it emerges from the epandrium (Plate XCI fig. 735). Neither specimen keyed directly to *parenti* because of the variable number of propleural bristles, a feature which appears not to have been noted before in *Medetera*. The original description (Stackelberg, 1925) did not give the number of propleurals, only that they were white. In Negrobov (1972-77) *parenti* is described as having four propleurals, the upper two clearly smaller than the lower two, and this is used in his key, but in the specimens examined the male and female respectively had five and six on each side, the upper two or three tending to be weaker, but not markedly so. Thuneberg (1955) gives the number as four or five (only females were known to him) but in the same paper he describes a new species, *collini* having two propleurals, which was synonymized with *parenti* by Negrobov (1972-77). Ivan Perry examined the other specimens from the same source and found the propleurals variable in number and size *viz*:

	Left side	Right side
Male	4 subequal	obscured by leg and not counted
Female 1	6 (3 upper shorter)	4 (lowest very strong and 3 upper very small)
Female 2	5 (2 upper shorter)	5 subequal
Female 3	5 subequal	7 (3 upper shorter)

Thus the propleural bristles in *M. parenti* are unusually variable, from four (or two if *collini* is indeed conspecific) to seven, with the upper ones usually weaker.

The two specimens I examined otherwise agree with the description in Negrobov (1972-77) except that some parts are somewhat darker. The arista is black, not yellowish-brown, the tibiae almost black, not brown, and the squamal border brown, not light yellow. This agrees with Bickel's (1985) observation referred to below under *M. veles*.

Ivan Perry has supplied the following information. Bark and sappy material, containing numerous *Neopachygaster meromelaena* (Dufour) larvae, were collected on 10.vi.86 from two fallen grey poplars (*Populus canescens* (Aiton) Sm.) at Lode, Cambridgeshire. The trees had fallen in a severe gale earlier in the year and showed signs of 'die back'. Between 13 and 17.vi. two male and four female *M. parenti* emerged. Unfortunately the logs were removed by mid-July and no further material was collected.

M. parenti extends across north and central Europe to the Caucasus and south-east Siberia.

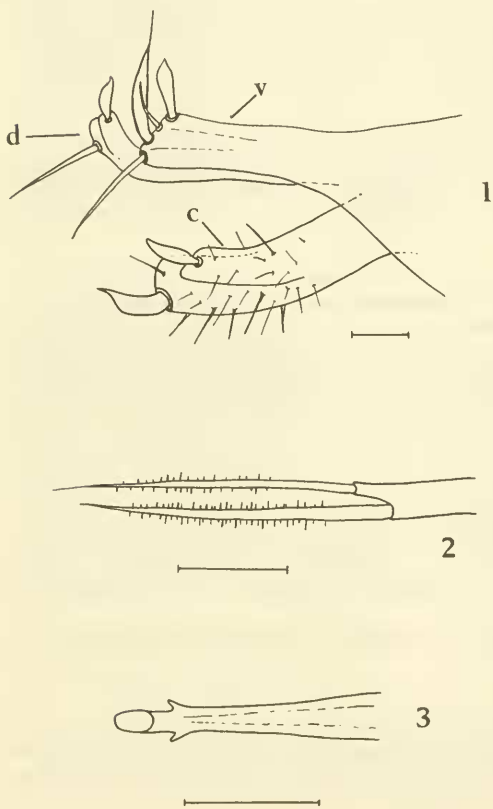
Medetera veles Loew 1861 sensu Bickel (= *bilineata* Frey 1915)

A dark, medium-sized species related to *infumata* Loew, among which one male was found, but distinguished by having pale halteres and distinct mesonotal stripes. The

British males agree well with the external characters described (as *bilineata*) in Negrobov (1972-77) and run without difficulty in his key to the last couplet containing *bilineata* and *jakuta* Negrobov, but genitalia characters differ from both in some details. A female which is almost certainly *veles* agrees with the description except that the third antennal segment is slightly longer than deep and the arista is slightly less distinctly apical.

Three British specimens are known, all from Scotland. One male was taken on the shore of Loch Garten, Inverness-shire (grid ref. 28/9616) 4.vii.82. (J. H. Cole). It was 'pooted' from a large barkless Scots pine log (*Pinus sylvestris* L.) together with several *infumata*. I returned to this log 2 years later on 15.vii.84 with Peter Chandler and Peter Dyte, but a patient search of it and adjacent logs and pine stumps failed to reveal any more specimens although *infumata* was still present.

One male is known from Loch Minard, Argyllshire (grid ref. 17/8124) 17.vi.78 and one female from Braelangwell Wood (birch and pine with calcareous flushes), East Ross (grid ref. 28/6963) 16.vi.76 (Dr A. G. Irwin).



Figs. 1-3. *Medetera veles scotica* var. nov., male genitalia. 1. Surstyli and cerci, lateral view, c = cercus, d = dorsal lobe of surstylus, v = ventral lobe of surstylus. 2. Left epandrial lobe, ventral view. 3. Tip of aedeagus. Scale lines = 0.05 mm.

Details of the Loch Garten male are shown in Figs 1–3. An apparently unique feature among Holarctic *Medetera* are the fine hairs standing at right angles on the setae of the epandrial lobe (surstylus of Negrobov). They are somewhat irregular in length and spacing but give an almost pectinate appearance (Fig. 2). The Minard Point male had been previously labelled *bilineata* by Peter Dyte without examining the genitalia, and I found that it agrees with the Loch Garten male in all respects except that the epandrial lobe setae are not pectinate although very minute points are visible under high magnification. More specimens need to be found to establish whether one form is aberrant or there is continuous variation between them. I have not been able to examine a continental *bilineata* but a comparison of the surstyli (gonopods of Negrobov) of the Scottish flies (Fig. 1) with Negrobov's (1972–77 Plate LIV Fig. 426) shows obvious differences. In the latter the surstylus appears to be undivided, but to have a club-shaped terminal process. However Negrobov describes the surstylus as being divided into dorsal and ventral lobes, so the apparent apical process in his figure is misleading and must represent the ventral lobe. The cerci and their large terminal setae are differently shaped but within the range of variation figured by Bickel (1985) for *veles*. These variations were found in long series of specimens from certain localities and are not geographical varieties. The cerci of *bilineata* are both figured and described by Negrobov (1972–77) as having two ventral processes, a leaf-shaped spine and a lobe, which latter is absent from the Scottish flies. The hypandrium and aedeagus are not described or figured by Negrobov, but they are rather simple and uniform in this species group and are probably of little diagnostic value.

Bickel (1985) has revised the Nearctic *Medetera* and was able to visit several European museums to examine types. He concluded from the male holotype of *bilineata* that it was a junior synonym of *veles*. I have examined two North American *veles* males and the hypopygia agree with Bickel's figure. They differ from the Scottish specimens principally in the weaker surstylus spines, the absence of the longer flattened spine on the tip of the ventral lobe, and the branched tips of the epandrial lobe setae which arise closer together on the common base.

M. veles is a common species over most of North America and follows a general tendency in *Medetera* noted by Bickel (1985) for species to vary in colour over a wide geographical range where '... the most consistent pattern is a pale coloration ... correlated with drier, sunnier habitats'. This also applies to the Palaearctic fauna as noted under *parenti* above, and another example seems to be *sphaeropyga* Negrobov which Bickel has also sunk under *veles*. It has pale legs and some pale hairs and setae and is therefore well separated from *bilineata* in Negrobov's (1972–77) key, but their hypopygia are closely similar according to his figures. From its description *jakuta* Negrobov must be another synonym of *veles* because it cannot be separated from *bilineata* on external characters, and the only differences are the branched epandrial lobe setae which arise closer together from the common base, and this is the North American *veles* form.

The *veles* group of *Medetera* appears to be highly successful and at present undergoing speciation in which the detailed genitalic morphology is particularly plastic. Bickel (1985) has taken the conservative view in 'regarding as intraspecific much of the variation found among members of a single genitalic type'. Our knowledge of the range of variation in the Palaearctic members of this species group is poor compared with the Nearctic fauna and there do not appear to be sufficient grounds for describing the Scottish specimens as new, but they are sufficiently distinct from continental *veles* (= *bilineata*) with no at present known intermediate forms, to require a distinguishing name, and I propose *scotica* var. nov.

The following modification of the Dolichopodid Handbook (Fonseca, 1978) key will accommodate both *parenti* and *veles*. Genitalia characters have not been used but confirmation from these structures should be obtained where there is any doubt.

27	Unchanged.	28
—	Two or more strong propleural bristles, sometimes with additional weaker ones in <i>parenti</i>	29
28	Unchanged.	
—	Unchanged.	
29	Clypeus dull black or dusted grey or brown.	29a
—	Clypeus strongly shining green, blue or purple, only narrowly dulled or dusted at sides.	29b
29a	Thorax not striped. Arista not more than 1.5 times length of antenna. Apical section of discal vein strongly curved. Larger sp. 3–3.5 mm. <i>melancholica</i> Lundbeck	
—	Thorax with distinct stripes. Arista more than 4 times length of antenna. Apical section of discal vein almost straight. Smaller sp. 2.5 mm. <i>veles</i> Loew	
29b	Clypeus brilliantly shining green.	30
—	Clypeus brilliantly shining blue-purple.	31
30	Thorax conspicuously and broadly striped. Acrostichals very small and numerous. Larger sp. 4.25–4.5 mm. <i>diadema</i> L.	
—	Thorax unstriped. Acrs normal. Smaller sp. 3.75–4.25 mm. <i>parenti</i> Stackelberg	
31	Unchanged.	
—	Unchanged.	

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